Claims 1-10 are currently pending in the instant application, claim 1 being the sole independent claim, and claims 2-10 depending either directly or indirectly therefrom.

I. Rejection under 35 USC 102(b)

Claims 1, 2, 4-6 and 9 have been rejected under 35 USC 102(b) as being anticipated by Omatsu. Reconsideration is respectfully requested in view of the following comments.

A. Omatsu

Omatsu discloses a piezoeletric ceramic actuator having a laminated body obtained by alternately laminating a plurality of piezoelectric ceramic layers and a plurality of internal electrode layers. In Omatsu, as shown in Figs. 2 and 3, there are ceramic particles contained within the internal electrode that bond two adjacent ceramic layers to one another. The average particle size of a ceramic powder to be mixed into an internal electrode is ranged from one-third to one time a thickness of the internal electrode. (Col. 2, lines 33-37). When the average particle size of the ceramic powder to be mixed is smaller than one-third the thickness of the internal electrode, the bonding strength cannot be satisfactorily obtained between the ceramic layer and the internal electrode. On the other hand, when the particle size is larger then the thickness of the internal electrode, the internal electrode is difficult or impossible to form. (Col. 2, lines 45-52). In Omatsu, the ceramic particles are mixed into the internal electrode in order to promote bonding with adjacent ceramic layers.

Omatsu fails to disclose internal electrodes separating at least portions of the insulating layers from each other, at least a part of at least one of the internal electrodes containing a silver-containing material, *the material of the at least one internal electrode having a component which at least one of reduces and inhibits a*

diffusion of silver from the at least one internal electrode into an insulating layer, as recited in sole independent claim 1 (emphasis provided). In Omatsu, the silver contained in the internal electrodes is clearly apt to diffuse from the material of the internal electrodes, and does not essentially remain in the electrode. In sole independent claim 1, however, the diffusion of silver is at least one of reduced an inhibited. As set forth in the specification, for example at page 2, third full paragraph, a consequence of the reduction and/or inhibition/suppression of the diffusion of silver is expressed by noting that "the silver added to the internal-electrode material essentially remains in the electrode, so that the negative influencing of the properties of the piezoelectric ceramic material, for example a PZT ceramic, by the diffusion of the silver is significantly reduced." In contrast, there is nothing in Omatsu that discloses (or that even remotely suggests) that the silver added to the internal-electrode material essentially remains in the electrode, as is the case with the present invention as set forth in sole independent claim 1. In fact, as things stand in Omatsu, the silver in the internal electrodes is apt to diffuse into the adjacent insulating layers without impediment. The presence of the ceramic particles of different possible sizes in a given internal electrode layer in Omatsu does nothing to in any way change the diffusivity of the silver already present in that internal electrode layer, contrary to the present invention as recited in sole independent claim 1, where a component of the material of an internal electrode at least on of reduces and inhibits a diffusion of silver from the electrode into an insulating layer.

Accordingly, it is submitted that sole independent claim 1 is patentable over Omatsu. Additionally, it is submitted that dependent claims 2, 4-6 and 9 are likewise patentable over Omatsu by virtue of being directly or indirectly dependent from sole independent claim 1, and further for the particular additional features that they recite. Therefore, the Examiner is respectfully requested to reconsider and withdraw his rejection of claims 1, 2, 4-6 and 9 under 35 USC 102(b).

B. Yasuda et al.

Claims 6 and 7 have been rejected under 35 USC 102(b) as being anticipated by Yasuda et al. Reconsideration is respectfully requested in view of the following comments.

Yasuda et al. pertain to a piezoelectric transducer comprising a laminate of a plurality of piezoelectric plates with paste electrodes inserted therebetween and bonding the plates together. However, Yasuda et al. do not disclose internal electrodes separating at least portions of the insulating layers from each other, at least a part of at least one of the internal electrodes containing a silver-containing material, the material of the at least one internal electrode having a component which at least one of reduces and inhibits a diffusion of silver from the at least one internal electrode into an insulating layer, as recited in sole independent claim 1, from which claims 6 and 7 depend. Accordingly, claim 6 and 7 are patentable over Yasuda et al. for being dependent from claim 1, and further for the particular additional features that they recite. Therefore, the Examiner is respectfully requested to reconsider and withdraw his rejection of claims 6 and 7 under 35 USC 102(b).

II. Rejection under 35 USC 103(a)

Claim 3 has been rejected under 35 USC 103(a) as being unpatentable over Omatsu. Reconsideration is respectfully requested in view of the following comments.

Omatsu has been discussed in detail at Section I.A. above. Applicants respectfully submit that Omatsu, even if modified as suggested by the Examiner, fail to succeed in establishing a *prima facie* case of obviousness.

"To establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the

art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and must not be based on the Applicant's disclosure. *See* MPEP § 2142; *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

In the instant case, Omatsu fails to meet at least prong (3) of the obviousness test set forth above. As set forth in more detail in Section I.A. above, Omatsu does not disclose internal electrodes separating at least portions of the insulating layers from each other, at least a part of at least one of the internal electrodes containing a silver-containing material, the material of the at least one internal electrode having a component which at least one of reduces and inhibits a diffusion of silver from the at least one internal electrode into an insulating layer, as recited in sole independent claim 1, from which claim 3 depends. Therefore, Omatsu is inapplicable to claim 3 in the first instance, and cannot render the claim prima facie obvious.

Additionally, using different PZT compositions in the insulating layer from the ones disclosed in Omatsu, even assuming arguendo that a motivation for such a modification exists in the prior art, would not cure the basic deficiency in Omatsu noted above.

Accordingly, it is submitted that claim 3 is patentable over Omatsu. Therefore, the Examiner is respectfully requested to reconsider and withdraw his rejection of claim 3 under 35 USC 103(a).

III. Allowable Subject Matter

Applicant would like to thank the Examiner for the indication of allowable subject matter in claim 10. In view of the argued allowability of independent claim 1, from which claim 10 depends, claim 10 is being retained as a dependent claim.

CONCLUSION

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration, withdrawal of all grounds of rejection and issuance of a Notice of Allowance are solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 11-0600. The Examiner is invited to contact the undersigned to discuss any matter regarding this application.

Respectfully submitted,
KENYON & KENYON

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